



PORTLAND HARBOR

Congressional Briefing

November 25, 2015

Region 10



Overview

- National Remedy Review Board (NRRB)/Contaminated Sediments Technical Advisory Group (CSTAG) Meeting Overview
- Highlights from the Remedial Investigation
- Highlights from the Feasibility Study
- Decision Tree
- Preliminary Preferred Option Presented to NRRB/CSTAG
- Issues Presented for Boards' Feedback (i.e. cost)
- Summary of State and Tribal Comments
- Allocation
- Public/Decision Process



NRRB/CSTAG Meeting Overview

- NRRB and CSTAG received comments from:
 - the State of Oregon
 - the Lower Willamette Group
 - the Community Advisory Group
 - Yakama, Grand Ronde, Siletz, Warm Springs, Umatilla, Nez Perce Tribes
- EPA Presentation
 - Summary of the Remedial Investigation (RI)
 - Review of remedial alternatives in the Feasibility Study (FS)
 - Overview and rationale of alternatives, preliminary preferred alternative and the recommended option
- Questions from the NRRB/CSTAG
- State Presentation
- Tribal Presentations



Remedial Investigation Highlights

- Greatest risk to people who consume resident fish and shellfish from the site, although there are risks to people and wildlife from direct contact with sediment.
- Multiple contaminants in Portland Harbor pose risks to human health and the environment (direct contact and fish consumption)
- Most significant and pervasive contaminants are:
 - PCBs
 - PAHs
 - DDT and associated contaminants, DDE and DDD
 - Dioxins/Furans



Remedial Investigation Highlights (cont.)

- Pure product or Principal Threat Waste (PTW) located in the river in multiple places.
- Different areas of the river have different contaminants. Contamination is not homogeneous.
- There are 13 areas with greatest levels of contamination (hotspots).



Feasibility Study Highlights

- Objectives of the Cleanup:
 - Protect people and wildlife from direct contact with sediment
 - Protect people and wildlife from eating contaminated fish
 - Reduce the concentrations of contaminants in sediment and fish tissue
 - Protect people and wildlife from contaminated surface water and reduce contaminated groundwater migration
- Excavation and treatment of PTW that cannot be reliably contained in the river
- Cleanup Technologies:
 - Capping, Dredging/Excavation, Enhanced Monitored Natural Recovery (EMNR), Monitored Natural Recovery (MNR)



Decision Tree Analysis

- Decision tree logic defines the remedy
- Decision tree decisions based on several criteria, such as:
 - Location in the river: nearshore, intermediate zone or navigation channel?
 - Do concentrations exceed the Remedial Action Levels?
 - Is it PTW and outside of the hotspot areas? Can it be reliably contained?
 - Depth of contamination?
- Decision tree decisions will be based on design data enabling current conditions to dictate cleanup



Legend

— Site with Known Contaminated Riverbank

Alternative SMAs

- Alternative B
- Alternative C
- Alternative D
- Alternative E
- Alternative F
- Alternative G

0 1,000 2,000 3,000 4,000
Feet



Source Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Team's Preliminary Preferred Option

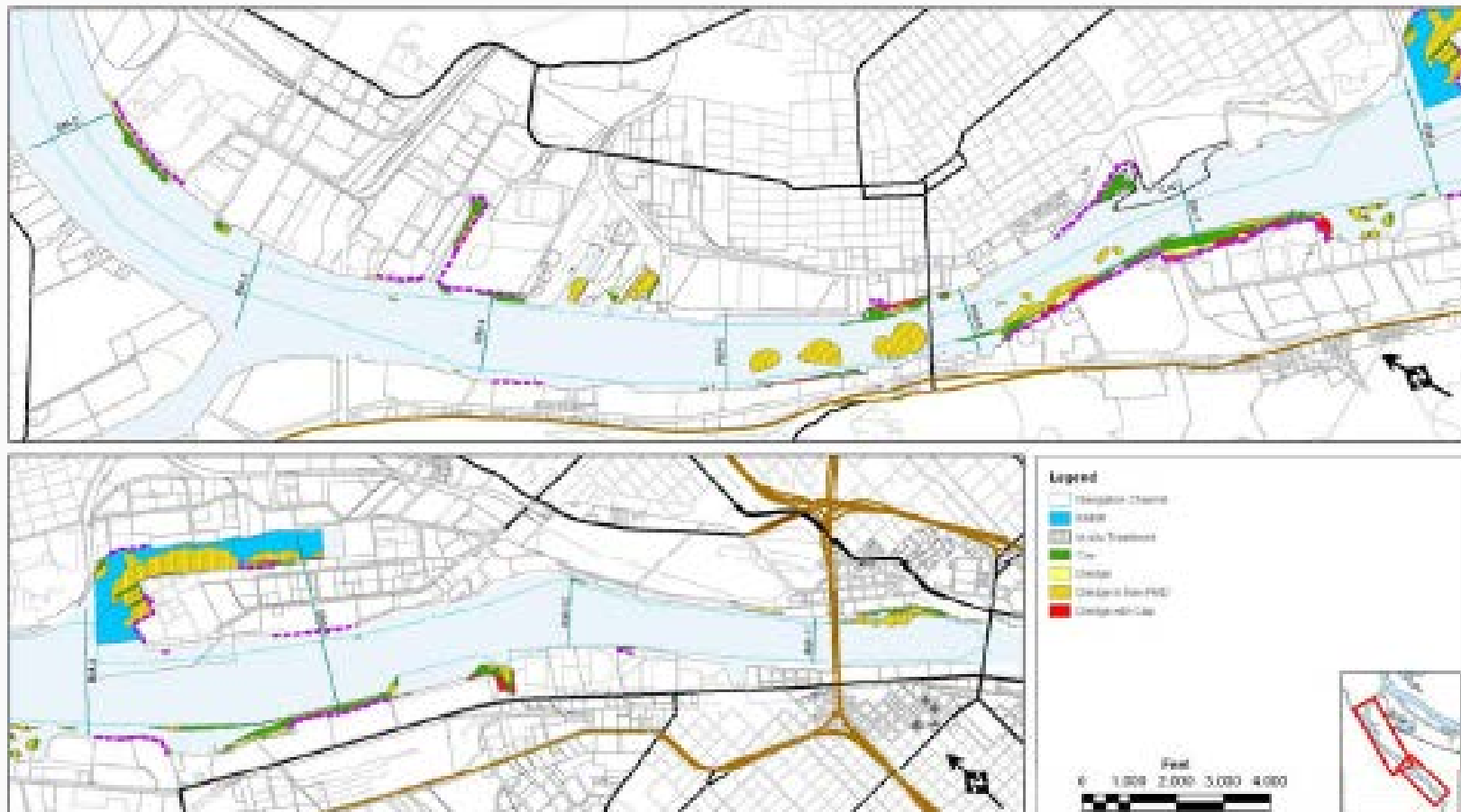
- NRRB process requires the Region to present an option for review and comment
- Based on the alternatives presented in the FS, alternative E has the best balance of tradeoffs and was used as a starting point
- However, the FS evaluation of alternatives indicates that no alternative reduces risk uniformly throughout the river, due to the heterogeneity of the contaminants throughout the river.
- Achieving uniform risk reduction throughout the site enhances the reliability of MNR to achieve cleanup levels.
- Therefore, EPA looked at an option that includes more aggressive action in some hotspot areas and less action in other hotspot areas to achieve similar risk reduction across all hotspot locations.



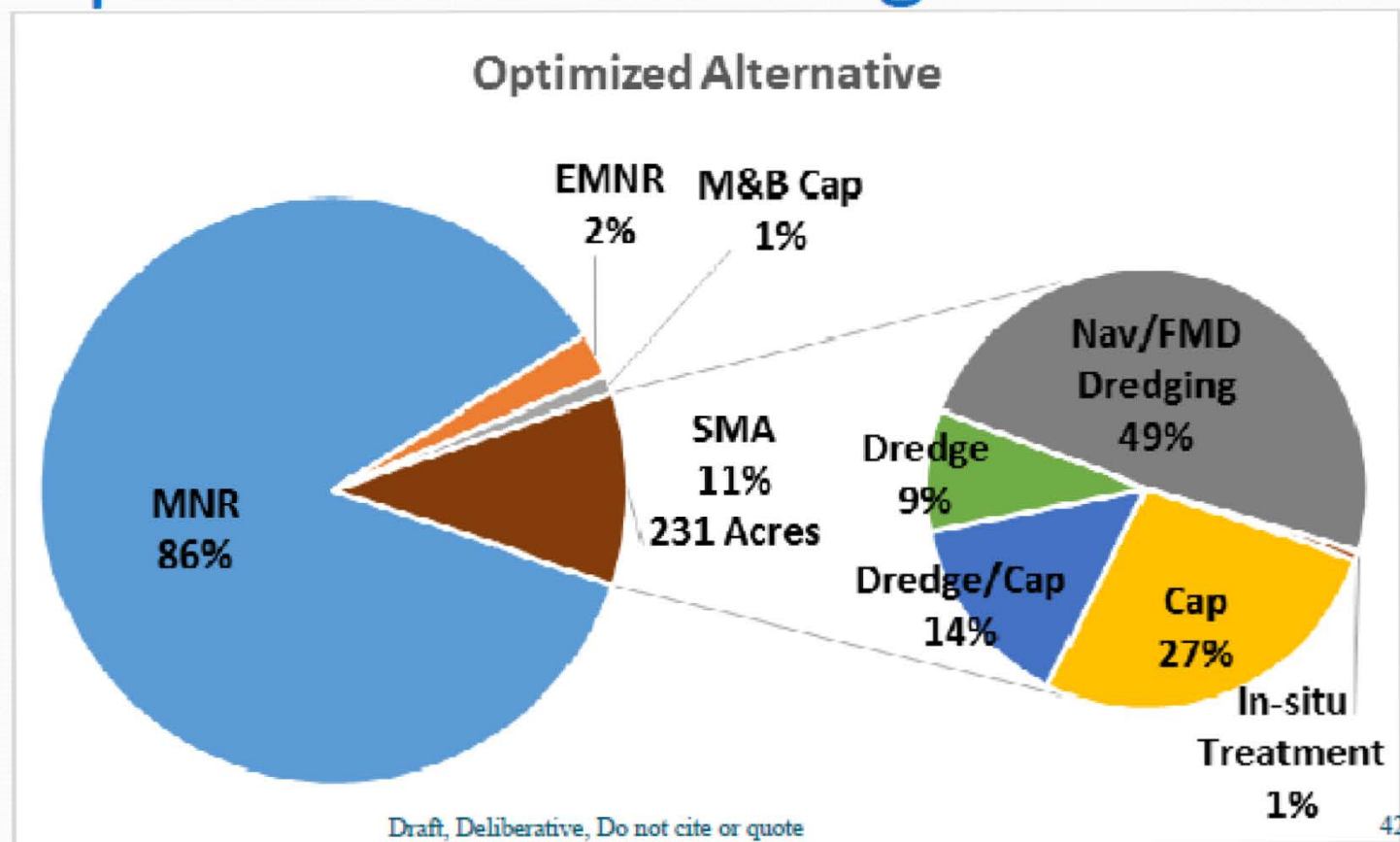
Preliminary Option Presented to the Boards

- For the following 5 of 13 primary areas, Alternative E is modified accordingly:
 - River mile 5.5 East—Alternative F (increases capping/dredging area)
 - River mile 6.5 East—Alternative B (decreases capping/dredging area) + PTW
 - River mile 6 Nav—Alternative B + PTW
 - River mile 6 West—Alternative D (decreases capping/dredging area)
 - River mile 7 West—Alternative F
- Based on current assumptions, cost estimate is \$1.4 billion and take 7 years to complete (costs being further refined)
- The trigger for cap or dredge for PCBs and PAHs are similar to Lower Duwamish

Option Presented to the Boards



Optimized Technologies





Issues Presented for Boards' Feedback

- Thoughts on achieving same risk reduction throughout 13 primary areas at end of construction
- Modelling:
 - Discussed models for predicting residual risks and effectiveness of MNR in the long term
 - Critiqued the model used by LWG
- Cost assumptions
 - Unit costs for dredging
 - Disposal costs
 - Mitigation costs
 - Unit costs for other work components



Summary of State and Tribal Comments

Oregon:

- Concerned about schedule—believe it's time to make a decision
- Believe their source control work will enable EPA cleanup to move forward
- Looking for opportunities to reduce costs
- Want less restrictions in the river/less reliance on fish advisories

Tribes:

- Want a remedy that achieves cleanup goals at the end of construction—suggest an alternative that goes beyond the most aggressive option—Alternative G+.
- Yakama care deeply about contaminant impacts to the Columbia.



Allocation

- Currently, there are about 90 parties participating in an independent allocation process
- EPA is not part of the allocation process
- EPA is very interested in the success of an allocation process.
- The LWG has asked EPA to provide cost estimates for each hotspot area and we will be working with them to accomplish this



Public/Decision Process

Pre-Proposed Plan – December 2015 through March 2016

- Goal is to conduct outreach and education for the public such that when the Proposed Plan is issued in Spring 2016, they already have technical background
- EPA will continue to work with our existing network of stakeholders in addition to reaching out to other groups.
- EPA will coordinate outreach with the state other parties conducting outreach activities, such as the City of Portland

Proposed Plan– March 2016 and 60-day public comment period

Record of Decision—December 2016